Worksheet 7 Server and client side processing
Answers

Activity 1:

a) Open the file **'Validation.html'** from the folder in a web browser

b) Enter your details in the two input boxes as shown on the web page

c) What happens?

If you enter a name and email, and press Submit, the form is reset to blank. If you do not enter anything, or enter data in only one field, an error message is displayed "Name must be filled out"

d) Open the same file in a text editor, such as Notepad, or in a web page editor such as Dreamweaver.

e) The function **validate** exists on the web page in the form of JavaScript:

```
<script>

function validate() {
    var x = document.forms["Form"]["Name"];
    var y = document.forms["Form"]["Email"];
    if (x.value == "" || y.value== "") {
        x.style.borderColor = "red";
        alert("Name must be filled out");
        return false;
    }
}
</script>
```

f) What is the purpose of this script?

The script informs the user about any failed validation from the Name input box. It checks to see if the box is empty or not; if it is, it provides an alert to inform the user. It also highlights the text box to give guidance to the user.

g) Currently, the function validates just the 'Name' box and checks if the value is blank.

Update the function so it can validate against a blank 'Email' box.

Change the **validate** function using the following code:

```
<script>
function validate() {
    var x = document.forms["Form"]["Name"];
    var y = document.forms["Form"]["Email"];
    if (x.value == "" ) {
        x.style.borderColor = "red";
        alert("Name must be filled out");
        return false;
    }
    else if (y.value ==""){
        y.style.borderColor = "red";
        alert("Email must be filled out");
        return false;
    }
    else if (y.value !=="" || x.value !==""){
        x.style.borderColor = "black";
        y.style.borderColor = "black";
    }
}
</script>
```

Save your web page. Open your web page in a web browser and test the new actions.

h) Why might it be useful from the clients point of view that the validation of this form takes part before being submitted via the Internet?

It allows for interactivity by immediately responding to the users' input. Allows for quick execution; the client does not need to communicate with the server to do this

Activity 2

a) Open up the file 'Google Maps API.html' using a web browser of your choice.

b) The web page should use the Google API script to display the general area of New York. You can interact with this map using all of the usual Google features, such as zooming in/out and changing the position of the map.

c) Open the web page in a text editor, such as Notepad, or in a web page editor such as Dreamweaver.

d) Take a look at the HTML and JavaScript code. Can you figure out how this script works?

e) Delete the following line of code:

```
<script src="http://maps.googleapis.com/maps/api/js"></script>
```

Reload your page in a web browser. What affect does this have on the web page?

This is the line that initialises the API, enabling the content to work as intended

The line of code you have just deleted is how the web page interacts with the Google Map servers – this is the line that initialises the API

f) Study the following script:

```
<script>
function G_Map() {
  var mapProp = {
    center:new google.maps.LatLng(40.742835, -73.882198),
    zoom:7,
    mapTypeId:google.maps.MapTypeId.ROADMAP
  };
  var map=new google.maps.Map(document.getElementById("googleMap"),mapProp);
}
google.maps.event.addDomListener(window, 'load', G_Map);
</script>
```

This is the function that defines the behaviour of the Google Map. It is completely defined by the user and processed client-side

g) Edit this JavaScript function to change the behaviour of the Google Map. You can change:
- The position of the map (LatLng)
- The amount of zoom
- The map type (ROADMAP, TERRAIN, SATELLITE or HYBRID)

h) Add another Google Map to your web page. Center the map on London or your school.

See Google Maps API Answer file